



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,734	08/25/2003	Klaus Moeller	23390-000121/US	1155
30593 7590 01/24/2008 HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER LAO, LUN S	
			ART UNIT 2615	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/646,734

Applicant(s)

MOELLER ET AL.

Examiner

Lun-See Lao

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 108 and 109 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 108-109 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Introduction***

1. This action is in response to the amendment filed on 10-31-2007. Claims 1-107 have been cancelled and claims 108-119 have been added. Claims 108-119 are pending.

### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10-31-2007 has been entered.

### ***Specification***

3. The amendment filed 10-31-2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

"at least some of said sound masking units including a digital processor configured for a sound masking signal generator" and "said zones include one or more of a sound masking zone, a non-masking zone, a timer zone, and a keypad zone".

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 108 and 114 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 108 recited "a plurality of sound masking units, at least some of said sound masking units including a digital processor configured for a sound masking signal generator and a communication interface for coupling to said communication network for receiving a plurality of control signals over said communication network- including a masking volume signal and a masking frequency signal". However, the specification does not clearly disclose the "at least some of said sound masking units including a digital processor configured for a sound masking signal generator" will be performed. It is not supported in the specification nor in any claim originary presented.

The specification discloses (pages 17 and 18 ) that that is a functional model 106 for adjusting the frequency spectrum of the audio signal output i.e. the sound masking signal or paging signal for one or more of the hubs. However, there is no disclosure of the some of the masking units being responsive to a masking frequency signal and of a controller receiving one or more control signals from the interface. Furthermore

Art Unit: 2615

the specification shows no differentiation between a masking volume signal and a masking frequency signal and no description as to how the sound masking units are responsive to a masking frequency signal. The examiner asserts that this does not read on the various limitations as recited above. Therefore, the various limitations identified above all read on new matter.

Claim 114 is essentially similar to claim 108 and is rejected for the reason stated above apropos to claim 108.

6. Claims 113 and 115 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 115 recited "said zones include one or more of a sound masking zone, a non-masking zone, a timer zone, and a keypad zone". However, the specification does not clearly disclose the "said zones include one or more of a sound masking zone, a non-masking zone, a timer zone, and a keypad zone" Will be performed. It is not supported in the specification nor in any claim originary presented.

Claim 113 is essentially similar to claim 115 and is rejected for the reason stated above apropos to claim 115.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 108-119 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 108-119 of copending Application No. 10/618,635. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant Claims 108-119 falls entirely within the scope of Claims 23-36, 41-51 and 57-61, 64-69 of application no. 10/618,635 or, in other words the instant Claims 108-119 are obvious over Claims 23-36, 41-51 and 57-61, 64-69 of application no. 10/618,635. The instant Claims 46-85 is a broader version of Claims 23-36, 41-51 and 57-61, 64-69 of application no. 10/618,635 and is therefore obvious over Claims 23-36, 41-51 and 57-61, 64-69 of application no.

Art Unit: 2615

10/618,635. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 108-119 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 108-119 of copending Application No. 09/791,802. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claims 46-86 of application no. 09/791,802 falls entirely within the scope of the instant Claims 108-119 or, in other words Claims 46-86 of application no. 09/791,802 are obvious over the instant Claims 108-119. The instant Claims 108-119 of application no. 10/646,743 is a broader version of the Claims 46-86 of application no. 09/791,802 and is therefore obvious over the Claims 46-86 of application no. 09/791,802. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 108-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horrall (US PAT. 6,888,945) in view of Farinelli et al (US PAT. 5,440,644).

Art Unit: 2615

Consider claim 108 as best understood with regards to the 112, first paragraph problem mentioned above, Horrall teaches a sound masking system for masking sound in a physical environment, said sound masking system comprising(see fig.1):

a communication network for said physical environment (see fig.1);

a plurality of sound masking units (see fig.10), at least some of said sound masking units including a digital processor(see fig.6a and col. 7 line 4-16) configured for a sound masking signal generator(16) and a communication interface(by jack) for coupling to said communication network for receiving a plurality of control signals over said communication network including a masking volume signal and a masking frequency signal, and said sound masking signal generator being responsive to said masking volume signal and said sound masking frequency signal for generating a sound masking output signal, said sound masking output signal having a volume derived from said masking volume signal and a frequency characteristic derived from said sound masking frequency signal (see fig.7 and see col. 5 line 3 –17 and col. 8 line 8-col. 9 line 47); but Horrall does not explicitly teach a control unit configured to generate said control signals including said masking volume signal and said masking frequency signal, and said control unit having a communication interface for coupling to said communication network for transmitting said control signals to selectively control operation of said plurality of sound masking units.

However, Farinelli discloses a speaker system network comprising a plurality of speaker units (zone 1 and zone 2) (i.e. sound masking units), wherein the plurality of speaker units are controlled by control data transmitted to the plurality of speaker units;



Art Unit: 2615

and a control unit (Fig. 1a (1100) and see col. 10 line 35-col. 11 line 39) configured to generate the control signals to selectively control operation of the plurality of speaker units, and configured to send the control signals over the communication network (Figs. 11a and 11b) in order to allow an operator to remotely control the plurality of speaker units, which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone (Figs. 11a and 11b; col.11 line 40-col. 13, lines 35).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Horrall with the teaching of Farinelli to incorporate the functions of a speaker unit for use in a speaker network system (such as the speaker network system of Horrall)(Horrall, Figs. 1 and 10) in order to allow an operator to control the plurality of speaker units (i.e. sound masking units), which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone.

Therefore, Horrall as modified discloses each sound masking signal generator configured to generate and output a sound masking signal (Horrall, Fig. 1; column 5,

Art Unit: 2615

lines 1-16) based on a control signal received over the communication network (i.e. the sound masking of Horrall receives control data from the control unit of Farinelli in order for each sound masking signal generator of Horrall to be controlled by the control unit of Farinelli in order for each sound masking signal generator configured to generate and output a sound masking signal based on a control signal received over the communication network) (Horrall, Fig. 11a; Farinelli, col. 10 line 35-col. 11 line 39); and a control unit configured to generate the control signals to selectively control operation of the plurality of sound masking units, and configured to send the control signals over the communication network (Farinelli, Figs. 11a and 11b; col. 11line 40-col. 13 line 35).

Consider claim 109 Horrall teaches the sound masking system, wherein said sound masking unit includes an address component for recognizing control signals intended for the sound masking unit associated with said address component(see figs 6a-6b and see col. 6 line 13-col. 7 line 16).

Consider claim 110, Horrall as modified discloses the plurality of sound masking units are associated with a plurality of sound masking zones, each sound masking unit being associated with one of the plurality of sound masking zones, and said sound masking units providing sound masking for the associated sound masking zone independently of said other sound masking zones (i.e. Horrall as modified comprising control data which enables the control of the desired sound masking in order to perform the desired functions)(Horrall, Fig. 1; Farinelli, Figs. 11a and 11b; col. 11line 40-col. 13 line 35).

Consider claim 111 Horrall as modified discloses the sound masking system, wherein said sound masking units associated with each of said sound masking zones

Art Unit: 2615

provide a sound masking output tailored for said associated sound masking zone and said sound masking output being based on said masking volume and said masking frequency signals (see figs 1 and 7 and see col. 5 line 3-16 and col.7 line 17-45).

Consider claim 112 Horrall teaches that the sound masking system, further comprising a plurality of zones, and one or more of said sound masking units being configured for one or more of said zones (see figs 1 and 7 and see col. 5 line 3-16 and col.7 line 17-45).

Consider claim 113, as best understood with regards to the 112, first paragraph problem mentioned above, Horrall as modified discloses the sound masking system, wherein said zones includes one or more of a sound masking zone, a timer zone, and a keypad zone (Farinelli, Figs. 11a and 11b; col. 11line 40-col. 13 line 35).

Consider claim 114 as best understood with regards to the 112, first paragraph problem mentioned above, Horrall teaches a sound masking system for controlling the ambient noise in a physical environment, said sound masking system comprising (see ifg.1):

- a communication network for said physical environment (see fig.1);

- a plurality of sound masking units(see fig.10), at least some of said sound masking units including a sound masking generator (3) comprising a processor(see fig.6a and col. 7 line 4-16) configured to generate a sound masking signal and a communication interface (by jack) for coupling to said communication network for receiving one or more control signals over said communication network including a masking volume signal and a masking frequency signal, and said sound masking generator being responsive to

said masking volume signal and said sound masking frequency signal for generating said sound masking signal; a control unit configured to generate said one or more control signals including said masking volume signal and said masking frequency signal (see fig.7 and see col. 5 line 3 –17 and col. 8 line 8-col. 9 line 47); and a plurality of zones, and one or more of said sound masking units being configured for one or more of said plurality of zones (see figs 1 and 10 and see col. 5 lines 3-16); but Hoarrall does not explicitly teach control unit having a communication interface for coupling to said communication network for transmitting said one or more control signals to selectively control operation of said plurality of sound masking units.

However, Farinelli discloses a speaker system network comprising a plurality of speaker units (zone 1 and zone 2) (i.e. sound masking units), wherein the plurality of speaker units are controlled by control data transmitted to the plurality of speaker units; and a control unit (Fig. 1a (1100) and see col. 10 line 35-col. 11 line 39) configured to generate the control signals to selectively control operation of the plurality of speaker units, and configured to send the control signals over the communication network (Figs. 11a and 11b) in order to allow an operator to remotely control the plurality of speaker units, which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone (Figs. 11a and 11b; col.11 line 40-col. 13, lines 35).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Horrall with the teaching of Farinelli to incorporate the functions of a speaker unit for use in a speaker network system (such as the speaker network system of Horrall)(Horrall, Figs. 1 and 10) in order to allow an operator to control the plurality of speaker units (i.e. sound masking units), which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone.

Therefore, Horrall as modified discloses each sound masking signal generator configured to generate and output a sound masking signal (Horrall, Fig. 1; column 5, lines 1-16) based on a control signal received over the communication network (i.e. the sound masking of Horrall receives control data from the control unit of Farinelli in order for each sound masking signal generator of Horrall to be controlled by the control unit of Farinelli in order for each sound masking signal generator configured to generate and output a sound masking signal based on a control signal received over the communication network) (Horrall, Fig. 11a; Farinelli, col. 10 line 35-col. 11 line 39); and a control unit configured to generate the control signals to selectively control operation of the plurality of sound masking units, and configured to send the control signals over the communication network (Farinelli, Figs. 11a and 11b; col. 11line 40-col. 13 line 35).

Art Unit: 2615

Consider claim 115, as best understood with regards to the 112, first paragraph problem mentioned above, Horrall as modified discloses the sound masking system, wherein said zones include one or more of a sound masking zone, a non-masking zone, a timer zone, and a keypad zone (Farinelli, Figs. 11a and 11b; col. 11line 40-col. 13 line 35).

Consider claim 116 Horrall teaches a networkable sound masking device comprising: a processor (14 in fig.3) configured to receive one or more control signals from said interface (20), said one or more control signals being intended for the networkable sound masking device and said one or more control signals comprising a masking volume signal and a masking frequency signal(see figs 6a-6b and see col. 6 line 13-col. 7 line 16); said processor being configured to generate a sound masking signal in response to said masking frequency signal; and an output stage configured to output said sound masking signal(see fig.7 and see col. 5 line 3 –17 and col. 8 line 8-col. 9 line 47); Horrall does not explicitly teach an interface configured to interface to a network.

However, Fraxinelli teaches an interface configured to interfacing to a network (Figs. 11a and 11b; col. 11line 40-col. 13 lines 35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Fraxinelli into Horrall to Provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone.

Art Unit: 2615

Consider claims 117-118 Horrall teaches the networkable sound masking device, wherein said interface includes an address component configured to recognize said one or more control signals intended for the networkable sound masking device(see figs. 1, and 6-7 and col. 6 line 13-col. 7 line 45); and the networkable sound masking device, wherein said output stage comprises an amplifier and said processor being configured to control said output stage in response to said masking volume signal(see figs. 1, and 6-7 and col. 6 line 13-col. 7 line 45).

12. Claim 119 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horrall (US PAT. 6,888,945) as modified by Farinelli et al (US PAT. 5,440,644) as applied to claim 116 above, and further in view of Ritter (US PAT. 4,686,693).

Consider claim 119 Horrall and Farinelli do not explicitly teach the networkable sound masking device, wherein said sound masking module comprises a random noise generator having an output coupled to an equalizer stage, and said processor being configured to control said equalizer stage in response to said masking frequency signal.

However, Ritter teach the networkable sound masking device, wherein said sound masking module comprises a random noise generator having an output coupled to an equalizer stage, and said processor being configured to control said equalizer stage in response to said masking frequency signal (see fig.1 and see col. 4 line 23-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ritter into the teaching of Horrall and Farinelli to provide the optimum adjustment of individual zone masking devices. Fine

Art Unit: 2615

volume changes are easily made to meet the individual acoustic demands of the masking zone and the personal preferences of persons therein. The ease of adjustment makes it quite easy to slowly change the masking signal volume as needed, whereby the occupants of the masked area are not distracted by a sudden increase or decrease in background masking noise.

### ***Response to Arguments***

13. Applicant's arguments with respect to claims 108-119 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sepmeyer (US PAT. 3,980,827) is cited to show other related networked sound masking system.

15. Any response to this action should be mailed to:

Mail Stop \_\_\_\_ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:  
**(571) 273-8300**

Hand-delivered responses should be brought to:  
Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner




Art Unit: 2615

should be directed to Lao, Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao, Lun-See *L.S.*  
Patent Examiner  
US Patent and Trademark Office  
Knox  
571-272-7501  
Date 12-31-2007

  
**VIVIAN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**